

VALLEY PREPARATORY SCHOOL

K-8 SCIENCE STANDARDS

Based on the Next Generation Science Standards



UNDERSTANDING THE SCIENCE STANDARDS

The **Next Generation Science Standards** (NGSS) are K–12 science content standards. Standards set the expectations for what students should know and be able to do. The NGSS were developed by states to improve science education for all students. A goal for developing the NGSS was to create a set of research-based, up-to-date K–12 science standards. These standards give educators the flexibility to design classroom learning experiences that stimulate students' interests in science and prepares them for college, careers, and citizenship. **Valley Preparatory School** adopted these standards to begin the 2018-19 school year. Below, you will find four **Domains** listed for each grade level: Physical, Life, and Earth Science, in addition to Engineering, Technology, & Applications (which includes elements of our STEAM program). Beneath each Domain are listed **Disciplinary Core Ideas** DCI. By clicking-on each DCI, you will be directed to the NGSS website which provides further details about the learning-standards associated with each core-idea. Teachers assess these standards throughout the year and then summarize the results of these assessments (by Domain) on the Report Card.

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Physical Science

- [K-PS2 Motion and Stability: Forces and Interactions](#)
- [K-PS3 Energy](#)

Life Science

- [K-LS1 From Molecules to Organisms: Structures and Processes](#)

Earth Science

- [K-ESS2 Earth's Systems](#)
- [K-ESS3 Earth and Human Activity](#)

Engineering, Technology, and Applications of Science: [K-2-ETS1 Engineering Design](#)

FIRST GRADE

Physical Science

- [1-PS4 Waves and Their Applications in Technologies for Information Transfer](#)

Life Science

- [1-LS1 From Molecules to Organisms: Structures and Processes](#)
- [1-LS3 Heredity: Inheritance and Variation of Traits](#)

Earth Science

- [1-ESS1 Earth's Place in the Universe](#)

Engineering, Technology, and Applications of Science: [K-2-ETS1 Engineering Design](#)

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SECOND GRADE

Physical Science

- **2-PS1 Matter and Its Interactions**

Life Science

- **2-LS2 Ecosystems: Interactions, Energy, and Dynamics**
- **2-LS4 Biological Evolution: Unity and Diversity**

Earth Science

- **2-ESS1 Earth's Place in the Universe**
- **2-ESS2 Earth's Systems**

Engineering, Technology, and Applications of Science: **K-2-ETS1 Engineering Design**

THIRD GRADE

Physical Science

- **3-PS2 Motion and Stability: Forces and Interactions**

Life Science

- **3-LS1 From molecules to Organisms: Structures and Processes**
- **3-LS2 Ecosystems: Interactions, Energy, and Dynamics**
- **3-LS3 Heredity: Inheritance and Variation of Traits**
- **3-LS4 Biological Evolution: Unity and Diversity**

Earth Science

- **3-ESS2 Earth's Systems**
- **3-ESS3 Earth and Human Activity**

Engineering, Technology, and Applications of Science: **3-5-ETS1 Engineering Design**

FOURTH GRADE

Physical Science

- **4-PS3 Energy**
- **4-PS4 Waves and Their Applications in Technologies for Information Transfer**

Life Science

- **4-LS1 From Molecules to Organisms: Structures and Processes**

Earth Science

- **4-ESS1 Earth's Place in the Universe**
- **4-ESS2 Earth's Systems**
- **4-ESS3 Earth and Human Activity**

Engineering, Technology, and Applications of Science: **3-5-ETS1 Engineering Design**

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FIFTH GRADE

Physical Science

- 5-PS1 Matter and Its Interactions
- 5-PS2 Motion and Stability: Forces and Interactions
- 5-PS3 Energy

Life Science

- 5-LS1 From Molecules to Organisms: Structures and Processes
- 5-LS2 Ecosystems: Interactions, Energy, and Dynamics

Earth Science

- 5-ESS1 Earth's Place in the Universe
- 5-ESS2 Earth's Systems
- 5-ESS3 Earth and Human Activity

Engineering, Technology, and Applications of Science: 3-5-ETS1 Engineering Design

MIDDLE SCHOOL (6-8TH)

Physical Science

- MS-PS1 Matter and its Interactions
- MS-PS2 Motion and Stability: Forces and Interactions
- MS-PS3 Energy
- MS-PS4 Waves and their Applications in Technologies for Information Transfer

Life Science

- MS-LS1 From Molecules to Organisms: Structures and Processes
- MS-LS2 Ecosystems: Interactions, Energy, and Dynamics
- MS-LS3 Heredity: Inheritance and Variation of Traits
- MS-LS4 Biological Evolution: Unity and Diversity

Earth Science

- MS-ESS1 Earth's Place in the Universe
- MS-ESS2 Earth's Systems
- MS-ESS3 Earth and Human Activity

Engineering, Technology, and Applications of Science: MS-ETS1 Engineering Design